Section A – Multiple Choice Questions [20 marks]

NOTE: Please use the Multiple Answer Sheet for this section.

1. How many bytes is 27KB?
   A. 11011 bytes
   B. 27468 bytes
   C. 27648 bytes
   D. 28311552 bytes
   E. 27000 bytes

2. Sunita has an MP3 player on which it is written 2GB. What does the 2GB most likely mean?
   A. The battery life of the player
   B. It was made in Great Britain
   C. It is the storage capacity of the player
   D. It is a common radio station on which the player is connected
   E. It means that it is the best player available on the market

3. A Compact Disk (CD) has a storage capacity of 700MB. Assuming the average size of an MP4 file is 6MB. What is the maximum number of MP4 files that can be stored in the CD?
   A. 117
   B. 116
   C. 115
   D. 114
   E. MP4 files cannot be stored on CDs

4. Read carefully the following statements:
   I. The Operating System (OS) is like a Manager in the Computer who shares the CPU among the different processes needing it.
   II. The OS manages the space needed to load programs on the RAM
   III. Microsoft Word is the most common OS used by PC users in the World, much more than Linux or Mac OS X

Which of the above statements is/are **NOT** true?

A. III
B. I
C. II
D. All of them are False
E. All of them are True

5. Norton Utilities is an example of:
   A. Drivers
   B. Translators
   C. Utilities
   D. Operating Systems
   E. None of the above

6. Mr Benoit owns a pharmacy in town. He has to print receipts every day. Which of the following printers would you recommend to him in order to get the cheapest cost per page printed over a long period of time?
   A. Laser colour printer
   B. Laser printer (Black only)
   C. Dot-Matrix printer
   D. A plotter
   E. None of the above

7. Which of the following component allows for a fluid display while playing video games on your computer?
   A. A wireless game pad
   B. A good DVD-ROM drive with recording capability
   C. A touch screen sensor on the monitor
   D. A network card
   E. A good graphic card

8. A processor is connected to the motherboard through a
   A. Port
   B. Memory Slot
   C. Bus
   D. PCI slot
   E. Socket

9. When you buy a laptop, you most likely want to know its processing speed. Which of the following indicates how much powerful the processor is?
   A. 1TB
   B. 2GHz
   C. 3GB
   D. GPU clock 850MHz
   E. 1 Firewire

10. Which of the following gives a list of memory in ascending order of speed access?
   A. RAM, Hard Disk, L1 Cache, L2 Cache
   B. L1 Cache, RAM, Hard Disk, L2 Cache
   C. L1 Cache, L2 Cache, RAM, Hard Disk
   D. L2 Cache, L1 Cache, RAM, Hard Disk
   E. Hard Disk, RAM, L2 Cache, L1 Cache

11. Which of the following is an input device?
   A. Graph Plotter
   B. Printer
   C. Speaker
   D. Web Cam
   E. None of the above

12. The image below shows a new type of code that now appears on retail products.

Which of the following device you would most likely use to decode the information it holds?

A. A Light pen
B. A digitising tablet
C. A graph plotter
D. A Barcode reader
E. A Track Pad

13. Converting the decimal number 95 to binary **and then** to hexadecimal will respectively yield

A. 0101 1111 → 5F
B. 1001 0101 → 95
C. 5F → 0101 1111
D. 95 → 1001 0101
E. 1001 0101 → F5

14. Which of the following application programs can most likely be used to do calculations?

A. Photoshop
B. Microsoft Excel
C. Microsoft PowerPoint
D. Notepad
E. Microsoft Outlook

15. A collection of related information stored in well organised tabular formats and which are easily accessed by application programs is called

    A. Sever base
    B. DBMS
    C. Database
    D. Relational Model
    E. MDBS

16. Which of the following is NOT a logic structure of a flowchart?

    A. Sequence
    B. Loop
    C. Pseudocode
    D. Selection
    E. None of the above

17. Read carefully the following statements about Program Testing.

    I. Program testing is a quality assurance exercise whereby a program is debugged
    II. Program Testing can include a group of potential users to use the program and note down any discrepancy in the functioning of the software
    III. Program testing can detect syntax errors but not logical errors
    IV. Sample data are used to test the correct execution of each program statement.

    Which of the above statements is/are correct?

    A. All are correct
    B. Only the first three are correct
    C. The last one is incorrect
    D. I,II,IV are correct
    E. III is correct

18. Reshad has bought a brand new 12Megapixels digital camera with Bluetooth connectivity. He has taken some beautiful shots with it and wants to transfer the photos to his computer. From his camera user manual he reads that these are the means to transfer the pictures:

    I. Connect your camera to the computer using the USB cable

    II. Take out the SD memory card out of the camera and insert it in the SD card slot in your computer

    III. Connect the camera to the computer through Bluetooth connectivity

    Which of the above statements is/are false?

    A. I
    B. II
    C. III
    D. I and II
    E. None of them are false

19. Which of the following is hardware?

    A. The Data stored on the Hard disk
    B. The Processes run by the CPU
    C. The Printer driver
    D. The DVD-ROM drive
    E. The Mouse pointer

20. This type of keyboard is designed specifically to alleviate wrist strain associated with the repetitive movements of typing.

    A. Wireless
    B. Ergonomics
    C. Multimedia
    D. Internet
    E. Split

- End of Section A –

-

- **Section B – Fill in the Blanks with the appropriate word(s)[10 marks]**

NOTE: Please insert your answers in the table provided in the Answer Sheet.

1. The _____is located on the right corner of the keyboard and is a separate set of number keys, like that of a calculator, for quick input of numbers and arithmetic operators.
2. _____ are sockets that allow devices like keyboard, joystick, mouse and printer to be connected to the computer.
3. _____ is a kind of computer software that employs the capabilities of a computer directly to a task the user wishes to perform.
4. Internet Explorer, Firefox, Google Chrome are all examples of _____.
5. A typist would most likely use a _____ to create electronic documents such as letters, memos and reports.
6. _____ are the type of computers used to make very complex calculations such as determining the path of space craft when being launched in space (e.g. at the NASA).
7. When your computer shuts down abruptly due to a voltage surge, the hard disk can risk a failure called a _____ and this eventually results in loss of data.
8. _____ refers to the number of times per second that the image is redrawn on the monitor screen.
9. The lowest level of programming language is the _____. It represents data and program instructions as 0s and 1s, binary digits corresponding to the on and off electrical states in the computer.
10. The _____is also called the heart of the OS.

- **End of Section B -**

Section C – Open-Ended Questions [20 marks]

Question 1[10 marks]

(a) List down the steps of the programming process.

[3 marks]

(b) Karine is writing a program to calculate the area of a circle. However, her program should only output areas of value greater than or equal to 100cm^2. If the result is less than 100cm^2, the program would have to ask the user to re-input the radius.

NOTE:

$$A = PI * r * r$$

Where*A* is the area of circle and *r* is the radius of the circle

You are asked to draw a flowchart to represent the functioning of the program for calculation of the area of circle by Karine.

[6 marks]

(c) While writing the program, Karine mistype the formula for the area of circle. Instead of typing *A = PI * r * r*, she writes *A = 2 * PI * r*. What type of programming error is this?

[1 mark]

Question 2[10 marks]

(a) In the event of a tertiary educational fair, you have been asked to showcasethe course you are following so that prospective students can get a general idea of the programme.

i. State the software that you would use for this purpose.

[1 mark]

ii. Give a reason to justify your choice.

[2 mark]

(b) While setting up your computer at the fair, you notice that the computer monitor is flickering.

i. What can be the reason for this and how would you solve the problem?

[2 marks]

ii. State two types of monitors that are actually being used.

[2 marks]

(c) In the showcasing, you have to include statistical data such as a bar chart representing the percentage success in your programme over the last five years.

i. Which software will you use to generate the bar chart?

[1 marks]

ii. Justify your answer.

[2 marks]

- End of question paper -